

REMARKS/ARGUMENTS

Applicants respond herein to the Final Office Action dated January 24, 2008.

Applicants' attorneys appreciate the Examiner's continued thorough search and examination of the present patent application.

Claims 1-10 and 12-36 are pending in this application. Claims 5, 14, 23 and 32 have been allowed. Claims 1-4, 6-10, 12, 13, 15-22, 24-31 and 33-36 have been rejected.

Claims 1-4, 10 and 12-13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,903,717 to Sumnitsch ("Sumnitsch") in view of Japanese Patent Application Laid-Open No. 11-87294 ("294") in further view of U.S. Patent Application Publication No. 2002/0043275 to Okuda ("Okuda"). Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 6-9 and 15-18 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sumnitsch in view of '294 in view of Okuda and further in view of U.S. Patent No. 5,927,303 to Miya et al. ("Miya"). Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 19-20 and 28-29 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sumnitsch in view of '294 in view of Okuda and further in view of U.S. Patent No. 6,807,974 Ono et al. ("Ono"). Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 24-27 and 33-36 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sumnitsch in view of '294 in view of Okuda in view of Ono and further in view of U.S. Patent No. 5,927,303 to Miya et al. ("Miya"). Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 1-4, 6-9, 19-22, and 24-27 have been canceled.

The invention according to claim 10 recites "a pure water guide part" and "a plurality of chemical solution guide parts that are stacked in multistage on the first processing liquid guide part... and wherein an outer guard forming at least the lowermost chemical solution guide part in said plurality of chemical solution guide parts." The "outer guard forming at least the lowermost chemical solution guide part" has a characteristic form, according to which, the lowermost chemical solution guide part is positioned above, so as to cover a processing liquid passage of the

chemical solution guide part immediately overlying the lowermost chemical solution guide part.

Because the lowermost chemical solution guide part is positioned above the processing liquid passage of the chemical solution guide part that is positioned immediately above the lowermost chemical solution guide part, the position of the lowermost chemical solution guide part is not influenced by the position of the processing liquid passage of the chemical solution guide part, that is positioned immediately above the lowermost chemical solution guide part. In other words, the internal diameter of the lowermost chemical solution guide part and the internal diameter of the chemical solution guide part that is positioned immediately above the lowermost chemical solution guide part can be substantially the same without being influenced by the position of the processing liquid passage of the chemical solution guide part that is positioned immediately above the lowermost chemical solution guide part.

Therefore, the invention of claim 10 sets the distance between the lowermost chemical solution guide part and a substrate holding part and the distance between each of the chemical solution guide parts that are positioned above the lowermost chemical solution guide part and a substrate holding part substantially the same, while suppressing the increase in size of the plurality of chemical solution guide parts as a whole to the radial direction.

Further, the plurality of chemical solution guide parts are positioned outside the pure water guide part and the distance between each of the chemical solution guide parts and a substrate holding part is set to be greater than the distance between the pure water guide part and a substrate holding part. Hence, each of the chemical solution guide parts can receive processing liquid more favorably than a pure water guide part.

Thus, the invention of claim 10 produces an advantageous effect of suppressing the bounce of the processing liquid spattering from a rotating substrate and the attachment of the processing liquid to the substrate, while suppressing the increase in size of a substrate processing apparatus as a whole.

Claims 12, 13, and 15-18 are dependent on claim 10.

With respect to claim 28, this invention recites “a four-stage splash guard … composed of a first guard, second guard, third guard and fourth guard arranged in inner-to-outer order … wherein in a vertical direction, an inside of said first guard, a space between said first and second guards, a space between said second and third guard, and a space between said third and

fourth guards serve as a first guide part, second guide part, third guide part and fourth guide part, respectively and “said second guard is curved such that said inclined part forming said second guide part is positioned above said fourth cylindrical part forming said third processing liquid passage.”

Thereby, the position of a second guide part is not influenced by a position of a third processing liquid passage that corresponds to a third guide part. In other words, the internal diameter of the second guide part and the internal diameter of the third guide part that is positioned immediately above the second guide part can be set substantially the same without being influenced by the position of the third processing liquid passage.

Therefore, as in the invention of claim 10, the second invention produces an advantageous effect of suppressing the bounce of processing liquid spattering from a rotating substrate and the attachment of the processing liquid to the substrate, while suppressing the increase in size of a substrate processing apparatus as a whole.

Claims 29-31 and 33-36 are dependent on claim 28.

In contrast, the cited references Sumnitsch, Okuda, and Ono, separately or in combination, do not disclose, teach, or suggest the above quoted and discussed characteristics of a guard of independent claims 10 and 28. Even if the guards of all of the presented prior art references are used, the bounce of the processing liquid spattering from a rotating substrate and the attachment of the processing liquid to the substrate cannot be favorably suppressed.

Specifically, the benefit or the improvement of the invention of claims 10 and 28 over the prior art references is especially advantageous when the spattered processing liquid is a chemical solution. In such situations, the sputtering causes a problem in that a specific chemical is required to clean the attached (sputtered) chemical solution.

Accordingly, Sumnitsch, Okuda, Ono, and their combination do not render independent claims 10 and 28 obvious.

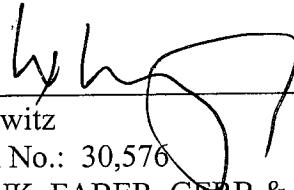
Moreover, claims 5, 14, 23, and 32 are allowable.

Claims 12-13, 15-18, 29-31, and 33-36 depend directly or indirectly from above discussed independent claims 10 and 28 and are, therefore, allowable for the same reasons, as well as because of the combination of features in those claims with the features set forth in the respective independent claims.

Accordingly, the Examiner is respectfully requested to reconsider the application, allow the claims as amended and pass this case to issue.

THIS CORRESPONDENCE IS BEING
SUBMITTED ELECTRONICALLY THROUGH
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Respectfully submitted,


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